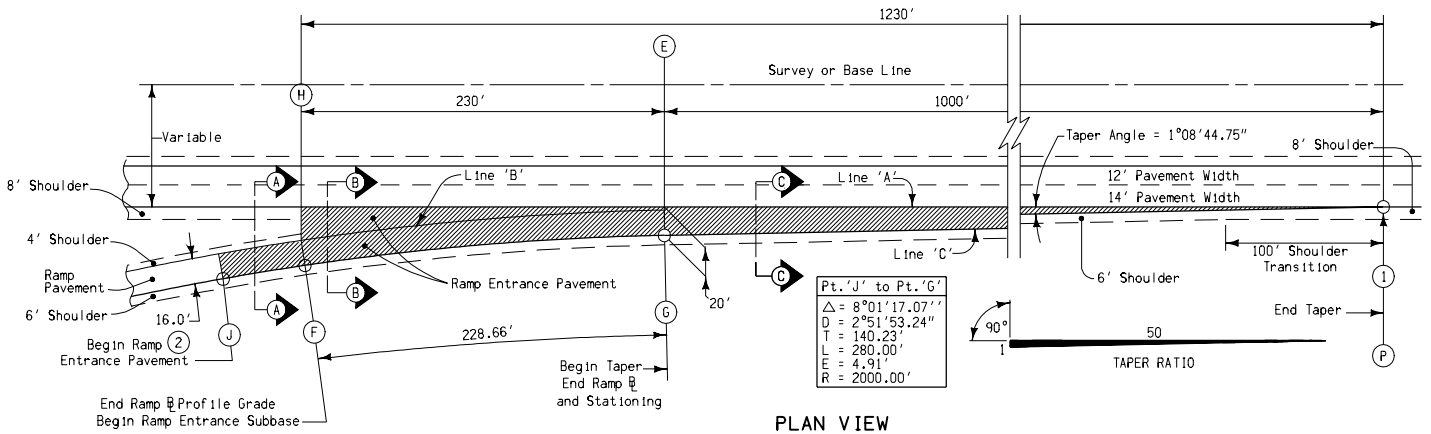
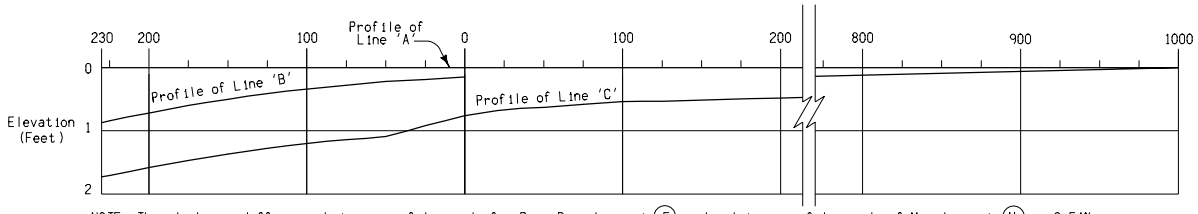


PLAN VIEW



NOTE: The algebraic difference between profile grade for Ramp Base Line at (F) and relative profile grade of Mainline at (H) is 0.54%.

PROFILE

GENERAL NOTES:

Ramp entrance pavement shall be the same thickness as the mainline pavement. Ramp entrance subbase for both HMA and PCC pavement shall be the same thickness as the mainline subbase.

Ramp entrance pavement area shown by shaded area is 1884 square yards.

Special shaping of entrance area between lines A and B may be required in order to assure proper drainage.

Refer to Detail Sheet 550-5 for jointing layout.

(1) For header construction details at end of taper, refer to the appropriate Typical 7101 or 7102.

(2) Refer to detail project plans for ramp alignment and superelevation data.

(3) The ramp pavement cross slope between point (J) and point (F) is determined by superelevation rotated about line "C". Refer to Standard Road Plan RP-3 and the project plans for superelevation transition requirements.

(H) (E)

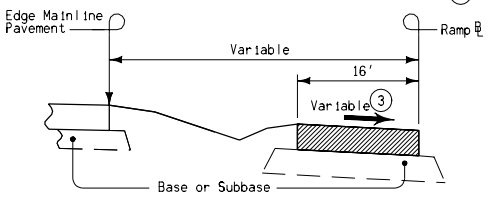
TABLE OF OFFSETS AND DROPS FOR 16' RAMP TAPER

Distance From Point (E) Along Line 'A' (Ft.)		230	225	200	175	150	125	100	75	50	25	0	25	50	75	100	200	300	400	500	600	700	800	900	1000
From Line 'A' To Line 'B'	Offset (Ft.)	21.76	21.09	17.94	15.10	12.57	10.36	8.47	6.88	5.61	4.65	4.0													
	Slope (%)	← Constant 4.0% Slope →										3.78													
	Drop (Ft.)	0.87	0.84	0.72	0.60	0.50	0.41	0.34	0.28	0.22	0.19	0.15													
From Line 'B' To Line 'C'	Offset (Ft.)	← Constant 16.0' Offset →																							
	Slope (%)	5.40	5.40	5.40	5.40	5.40	5.40	5.40	5.40	5.40	4.60	3.78													
	Drop (Ft.)	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.73	0.60													
From Line 'A' To Line 'C'	Offset (Ft.)												19.5	19.0	18.5	18.0	16.0	14.0	12.0	10.0	8.0	6.0	4.0	2.0	0.0
	Slope (%)												3.44	3.12	3.00	← Constant 3.0% Slope →									
	Drop (Ft.)	1.73	1.71	1.58	1.47	1.37	1.28	1.20	1.14	1.09	0.92	0.76	0.67	0.63	0.58	0.54	0.48	0.42	0.36	0.30	0.24	0.18	0.12	0.06	0.0
Distance From Point (G) Along Line 'C' (Ft.)		228.66	223.74	198.66	173.70	148.77	123.87	99.00	74.15	49.31	24.49	0.00													

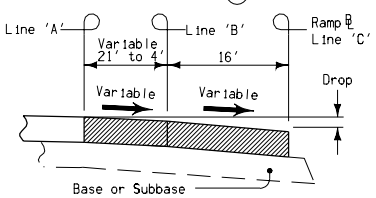
(F) (G) (P)

This design is based on 60 mph design speed at "e" max = 6%.

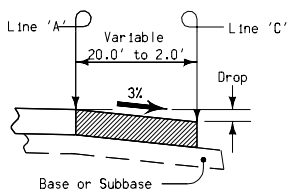
For location equivalent stations see Tabulation 101-15. Equate Point 'G' (Ramp Stationing) to Point 'E' (ML Stationing).



SECTION A-A



SECTION B-B



SECTION C-C

Iowa Department of Transportation
Highway Division

STANDARD ROAD PLAN | RV-5

REVISION: Change to even radius curve. Equate Point 'G' to Point 'E'.	REVISION NO.
	3
	REVISION DATE
APPROVED BY DESIGN METHODS ENGINEER	10-21-03

ACCELERATION TAPER FOR 16' ENTRANCE RAMP